

AMENDMENTS TO THE DRAWINGS

The attached "Replacement Sheets" of drawings include changes to Figures 3, 9, 17, and 18. The attached "Replacement Sheets," which include Figures 3, 9, 17, and 18, replace the original sheets including Figures 3, 9, 17, and 18.

Attachment: 4 Replacement Sheets (Pages 2/19, 5/19, 8/19, and 9/19)

REMARKS

Applicant would like to thank the Examiner for the thorough examination of the instant application. Claims 1-37 are now pending in the application, of which Claims 34-37 have been withdrawn from consideration. Claims 1-33 stand rejected. Claims 18 and 33 have been cancelled; Claims 1, 17, 26 and 29 have been amended; and Claim 38 is newly presented. Support for the amendments and for the new claim can be found throughout the application, drawings and claims as originally filed and, as such, no new matter has been presented. The Examiner is respectfully requested to reconsider and withdraw the rejections in view of the amendments and remarks contained herein.

DRAWINGS

The drawings stand objected to under 37 C.F.R. 1.84(p)(5) because they include the following reference signs not mentioned in the description: 50, Fig. 3; 74, Fig. 9; and 96, Figs. 17 and 18. Applicant has amended the drawings to overcome this objection, and attaches revised drawings for the Examiner's approval.

REJECTION UNDER 35 U.S.C. § 112

Claim 26 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point and distinctly claim the subject matter which Applicant regards as the invention. Specifically, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. Applicant has amended the claim to overcome this rejection. Therefore, reconsideration and withdrawal of this rejection are respectfully requested.

REJECTION UNDER 35 U.S.C. § 102 & § 103

Claims 17, 29 and 32 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Busch et al. (U.S. Pat. No. 5,061,914). Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Busch et al. in view of Parodi (U.S. PGPub No. 2002/0177891). Claims 19-20 and 30-31 stand rejected as being unpatentable over Busch et al. Claim 21 stands rejected as being unpatentable over Busch et al. in view of Johnson et al. (U.S. Pat. No. 5,619,177). Claims 22-23 and 33 stand rejected as being unpatentable over Busch et al. in view of Ishida et al. (U.S. PGPub No. 2001/0021290). Claim 24 stands rejected as being unpatentable over Busch et al. in view of Ingram (U.S. Pat. No. 5,836,066). Claims 25-26 stand rejected as being unpatentable over Busch et al. in view of Ingram and further in view of Cheng et al. (U.S. PGPub No. 2004/0074065). Claim 27 stands rejected as being unpatentable over Busch et al. in view of Ingram, further in view of Cheng et al., and further in view of Wetzel (U.S. Pat. No. 6,773,535). Claim 28 stands rejected as being unpatentable over Busch et al. in view of Ingram, further in view of Cheng et al., and further in view of Kornrumpf (U.S. Pat. No. 6,655,011). Claims 1-3, 5-6 and 13 stand rejected as being unpatentable over Busch et al. in view of Choi et al. (U.S. PGPub No. 2003/0062254) and further in view of Wetzel. Claim 4 stands rejected as being unpatentable over Busch et al. in view of Choi et al., further in view of Wetzel, and further in view of Johnson et al. Claim 7 stands rejected as being unpatentable over Busch et al. in view of Choi et al., further in view of Wetzel, and further in view of Tanaka et al. (U.S. PGPub No. 2002/0112788). Claims 8-9 stand rejected under 35

U.S.C. § 103(a) as being unpatentable over Busch et al. in view of Choi et al., further in view of Wetzel, and further in view of Ishida et al. Claims 10-12 and 14-16 stand rejected as being unpatentable over Busch et al. in view of Choi et al., further in view of Wetzel, and further in view of Sugihara et al. (U.S. PGPub No. 2003/0020502). These rejections are respectfully traversed.

With respect to the rejections of Claims 1-3, 5-6, and 13, the Office cites Wetzel (U.S. Pat. No. 6,773,535) as teaching “cutting a film to form a plurality of thin film actuators 5a (Fig. 1) after the step of parting a strain for the purpose of obtaining shorter strips of desired size (Column 11, lines 64-67) to be further assembled in the strained orientation (Column 12, lines 18-20).” While Applicant acknowledges the cutting of a single actuator to produce an actuator of a desired size, it appears that the reference does not teach touching a polymer film to form a plurality of thin film actuators. Nothing in the reference indicates that the portion removed was usable or used as an actuator. Further, Applicant submits that the reference discloses the cutting of shape memory metal and not the cutting of a polymer as claimed.

In an attempt to clarify Applicant's invention and to further distinguish the cited art, Applicant has amended independent Claims 1 and 17. In this regard, Applicant directs the Examiner's attention to independent Claim 1. Claim 1 has been amended to include the limitation “cutting polymer film in a plurality of directions to form a plurality of monolithic thin film actuators having generally the same size after the step of imparting a strain.”

Applicant directs the Examiner's attention to Figures 24a-25 and their accompanying paragraphs [0073] – [0083] of the instant application. As shown,

described is a method of mass producing thin film shaped alloy actuators. Applicant submits that none of the references disclose or suggest the methods claimed to produce the actuators claimed. As such, Applicant submits that Claims 1-16 are clearly distinguished from the references cited.

The Examiner's attention is directed to independent Claim 17. Claim 17 has been amended to include the limitation "cutting the shape memory alloy construction in a plurality of directions to form a plurality of monolithic film actuators having generally the same size after the step of conducting a post annealing process." For the reasons stated above, Applicant submits the references do not teach the cutting of a shape-memory film sputtered on a polyimide film. As such, Applicant submits that Claims 17 and 19-28 are clearly distinguished from the references cited.

The Examiner's attention is directed to Claim 29 which has been amended to include the limitation "cutting the shape memory alloy construction a plurality of times to form a plurality of monolithic thin film actuators after the step of etching the shape memory alloy film." Applicant submits that while the Parodi reference depicts the slicing of a tube into a stent member, it does not depict forming monolithic shape memory actuators as is claimed.

For this and the reasons stated above, Applicant respectfully submit that Claims 29-32 are in condition for allowance.

CONCLUSION

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests


that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the outstanding Office Action and the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (248) 641-1600.

Respectfully submitted,

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